
Unmanned Aircraft Systems in North Carolina



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1. Introduction

Small unmanned aircraft systems, commonly referred to as drones, have dramatically increased in popularity in North Carolina and the nation. Drones have been shown to be a favorite hobby for many individuals but have taken on a much more practical tool in the hands of surveyors and government agencies.

Their worth was highlighted during hurricane Matthew in 2016 and subsequent floods that ravaged Eastern North Carolina. Drones were invaluable in the hands of law enforcement and emergency management officials by surveying the extent of flooding and by dropping personal flotation devices to stranded residents.

This publication is intended to be an overview of the laws, both State and federal, that regulate the use of drones.

This publication is current as of September 2018 to reflect the most recent revisions to North Carolina law on drones set out in [House Bill 128](#), [Prohibit Drone Use over Prison/Jail](#).

2. Unmanned Aircraft Systems

What is an unmanned aircraft system (UAS)? An unmanned aircraft is one that is operated without the possibility of human intervention from within or on the aircraft. A UAS includes not only the aircraft (drone) but also any associated components that control the aircraft (for example, the controller used by the operator on the ground).

Obviously, restrictions on a UAS do not apply to any type of aircraft that is operated with a person either inside or on the aircraft. For example, a motor driven "ultralight" aircraft.

Both State and federal law govern the operation of drones.

State Authority - The North Carolina Department of Transportation, Division of Aviation, (DOT/DOA) has the authority to develop and administer a UAS knowledge test, and to set up a system to issue permits to operate a UAS. G.S. § 63-95.

The DOT/DOA is responsible for:

1. The UAS knowledge test;
2. Issuing North Carolina commercial and governmental UAS operator permits; and
3. Serving as the point of contact for all State related UAS issues.

The DOT/DOA is not responsible for:

1. Granting airspace use authorizations;
2. Granting UAS pilot certifications;
3. Federal Aviation Administration (FAA) commercial licensing; or
4. UAS airworthiness standards.

Federal Authority - Because a UAS is still considered an aircraft, it is subject to the regulations of the FAA. The FAA is solely responsible for regulating airspace. The FAA has the responsibility to establish requirements for UAS operations and for giving UAS operators authority to operate in United States airspace. The FAA has the authority to enforce all existing aircraft regulations on unmanned aircraft systems, including those that are used as a hobby. FAA rules prohibit the careless and reckless operation of a UAS used by a hobbyist to interfere with a manned aircraft. 49 U.S.C. 44809(e). Additionally, it is a Class H felony under North Carolina law for a person to use a UAS to damage, disrupt, or interfere with manned aircraft. G.S. § 14-280.3.

The FAA and North Carolina recognize three types of UAS operations:

1. Recreational operations (model aircraft);
2. Government operations (public aircraft used by law enforcement and emergency management officials); and
3. Commercial operations (civil aircraft).

3. Recreational Operations

Drones purchased and used solely for hobby or recreational purposes are not subject to State licensure requirements. This applies when nothing of value is provided to the operator of the UAS for either its use or images produced by the drone, and it is solely a recreational device.

A model aircraft is one that is either mechanically driven or launched into flight (a motor propels the aircraft or it is thrown to begin its flight) and is used solely for hobby or recreational purposes. G.S. § 63-94. The UAS cannot be used for payment, consideration, gratuity, or benefit by any person for the use of the aircraft or for photographic or video images produced by the aircraft.

Recreational UAS users do not have to take the State knowledge test or obtain a permit to operate a UAS. G.S. § 63-94. However, a recreational user still must take and pass the FAA's aeronautical knowledge and safety test, referred to below in subparagraph 7. 49 U.S.C. § 44809.

FAA has set guidelines for the recreational use of a UAS. 49 U.S.C. § 44809. The key points are:

1. The UAS must be flown only for recreational purposes;
2. The safety guidelines of an FAA-recognized Community Based Organization (CBO) must be followed (Note: the FAA has not yet begun to recognize CBOs – recreational users are directed to follow the safety guidelines of existing aeromodelling organizations, or the FAA's provided safety guidelines in Advisory Circular 91-57B);
3. The UAS must be flown within the visual line of sight (VLOS) of the operator or a visual observer who is co-located (physically next to) and in direct communication the operator;
4. The UAS must give way to and not interfere with manned aircraft;
5. The UAS must be flown in compliance with all airspace restrictions and prohibitions in controlled airspace (Class B, C, D, and E) and only with prior authorization;

6. The UAS must be flown at or below 400 feet in uncontrolled airspace (Class G);
7. The operator must take The Recreational UAS Safety Test (TRUST) and carry proof of passing the test;
8. The UAS must weigh less than 55 pounds (Note: a UAS weighing more than 55 pounds may be operated recreationally but must be operated at a UAS fixed site); and
9. The UAS must be registered and marked, and the operator must carry proof of registration and make it available to law enforcement upon request.

Furthermore, recreational UAS operators must still comply with North Carolina laws regarding the use of a UAS. For example, a recreational operator of a UAS would not be authorized to fly over another person's property without their consent and is prohibited from interfering with hunting or fishing activities (State UAS restrictions are discussed later in this publication).

4. Government and Commercial Operations

Using a UAS for any purpose other than recreation is subject to both FAA and North Carolina licensure and permitting requirements. Anyone who uses a UAS in North Carolina for any purpose other than recreation (Government or Commercial Operations) must take and pass the DOT/DOA knowledge test prior to operating a UAS in North Carolina. G.S. § 63-95.

For example, if someone flies a UAS for fun and in the process of flying the UAS takes a picture that is later sold or used to promote a business or product, then the flight will be defined as a commercial flight and consequently the operator will have to be licensed both federally and by the State as a commercial UAS operator.

4.1 Government Operations

Particular standards are established under State and federal law for drones used in government operations. These standards apply to government operations such as law enforcement, emergency medical services, and geological surveys, regardless of the type of UAS flown or the types of cameras or sensors on the UAS.

Any law enforcement agency that intends to use a UAS must first have the UAS operator pass the DOT/DOA knowledge test. The only exception from taking this test is the operator of a UAS under the authority of a federal agency (for example, military personnel). G.S. § 63-95(c).

Before operating a UAS weighing at or above 55 pounds for government purposes, the operator must obtain a Public Use Certificate of Authorization (COA) from the FAA to use the airspace and must also be authorized by the DOT/DOA to operate the UAS. To apply for a Public Use COA, operators must submit proof to the FAA that they are part of a public agency before completing the FAA's COA application process. Government operators must register their UAS with the FAA and obtain an "N-number" to be affixed to the UAS prior to operating the drone.

If the government agency plans on operating a UAS weighing less than 55 pounds it has two options: (1) obtain a public use COA (discussed above); or (2) operate under Part 107 of the FAA rules contained in the Code of Federal Regulations, Title 14, Part 107 – Small Unmanned Aircraft. 14 C.F.R. §§ 107.1 – 107.165.

If the agency chooses to operate under Part 107 of the FAA rules, its pilots must be certified through the FAA. 14 C.F.R. § 107.12. The agency must also comply with the operational rules in Part 107. However, there is process by which certain Part 107 operational rules can be waived. 14 C.F.R. §§ 107.200; 107.205.

If the agency chooses to apply for a public use COA and become a Public Aircraft Operator (PAO), it's UAS must meet the definition of "public aircraft" and the agency's use of the UAS must be for a "governmental function," as those terms are defined in 49 U.S.C. § 40102(a)(41) and 40 U.S.C. § 40125.

If qualified, the agency will be issued a "blanket" COA for operation in uncontrolled airspace (Class G). If the agency desires to operate in controlled airspace it will need a "Jurisdictional" COA.

Either framework, Part 107 of the FAA rules or PAO, allows operators the ability to request temporary, emergency airspace authorization, for a limited period of time at specific locations for situations that may not fit within Part 107 or the agency's COA (ex. search and rescue, critical infrastructure restoration, etc.). This is called a Special Governmental Interest (SGI) request.

There are upsides and downsides to operating as a PAO instead of under Part 107 of the FAA rules. The upside to operating as a PAO is a possible greater range of conditions in which the UAS can be operated, the ability to do mutual aid under a "blanket" COA anywhere in Class G airspace, and the ability to self-certify pilots to fly the UAS. The downside to operating as a PAO is more work to develop a robust program that ensures adequate pilot selection and aircraft maintenance, as well as the increased risk that comes with the agency certifying its own pilots and the airworthiness of its UAS.

It is up to the agency to decide what framework is best for its operations. There is nothing prohibiting an agency from becoming a PAO and operating under a public use COA but also having staff certified as remote pilots through Part 107 of the FAA rules to operate those flights that may not fall under the agency's COA.

More information about COAs can be found at:

https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/aaim/organizations/uas/coa

Additionally, the FAA maintains points of contact for law enforcement through the Law Enforcement Assistance Program (LEAP). FAA-LEAP can be contacted at: UAShelp@faa.gov or by calling 1-844-359-6982.

4.2 Commercial Operations

Any use of a UAS that is not conducted for recreational purposes, or for government purposes mentioned above, will be subject to the provisions of State and federal law that regulate commercial UAS operations.

Anyone operating a UAS for commercial purposes in NC must pass the DOT/DOA knowledge test and be issued a DOT/DOA permit. G.S. § 63-96.

If the commercial operator is operating a UAS weighing less than 55 pounds, they can operate under Part 107 of the FAA rules. If they are operating under Part 107 of the FAA rules, the remote pilot in command (RPIC) must "[p]resent his or her remote pilot certificate with a small UAS rating and identification . . . upon a request from . . . [a]ny Federal, State, or local law enforcement officer." 14 C.F.R. § 107.7.

Even package delivery can be done under Part 107 of the FAA rules as long as it is done completely within the State of North Carolina and in compliance with certain conditions.

If the commercial operator wishes to operate a UAS weighing 55 pounds or more, they must be granted either an airworthiness certificate or an exemption under 49 U.S.C. § 44807 and then the operator must obtain a COA.

Whether the operator is operating under Part 107 of the FAA rules or a COA, they must register the UAS with the FAA and receive an "N-number" for the UAS.

Any COA issued must be presented to law enforcement upon request as the second standard provision of the COA is: "This certificate shall be presented for inspection upon the request of any authorized representative of the Federal Aviation Administration or of any state or municipal official charged with the duty of enforcing local laws or regulations." FAA Public Safety Drone Playbook, pg. 11.

5. Regulations

5.1 North Carolina Authorizations to Operate a UAS

Once the operator of a UAS has obtained the necessary authorization from the FAA, as appropriate, the individual must also receive North Carolina authorization to operate a UAS for government or commercial purposes. This means that the individual must take and pass the North Carolina knowledge test and receive from the DOT/DOA either a commercial or a government UAS operator permit. Commercial or government operators must keep their North Carolina permit in their possession, and, per the permit's terms and conditions, also keep a valid government issued photo ID and their FAA airspace use authorization or Part 107 remote pilot certificate in their possession, at all times while operating a UAS in North Carolina. G.S. § 63-96.

Additional relevant information for North Carolina can be viewed at: <https://www.ncdot.gov/aviation/uas/>

5.2 FAA Restrictions and Airspace

Once a UAS is registered with the FAA and the operator of the UAS is authorized to operate the UAS by both the FAA and the DOT/DOA, the operator of the UAS must also be familiar with the various types of airspace and flight restrictions that are imposed by the FAA. These airspace restrictions apply to the altitude that a UAS can be flown and will also address what geographical areas and locations a UAS could or could not be flown over or near, such as military installations.

A detailed discussion of FAA airspace and flight restrictions is beyond the scope of this publication. However, detailed information on these restrictions can be found by accessing the FAA website or by contacting FAA officials. Interested individuals can contact the FAA through the following avenues:

- For questions in reference to UAS Certificates of Authorization (COA) and Waivers, call 1-844-359-6982.
- For general questions, comments, or complaints about UAS, please email the FAA: UAShelp@faa.gov

- For general questions regarding federal aviation regulations or enforcement, contact the FAA Flight Standards District Offices in Greensboro, at (336) 369- 3900, or in Charlotte, at (704) 319-7020.

The FAA also publishes several helpful documents for law enforcement on UAS operation:

1. A Law Enforcement Pocket Card.
2. “Drones in Public Safety: A Guide to Starting Operations.”
3. “First Responder Tactical Beyond Visual Line of Sight (TBVLOS) 91.113 Waiver Guide.”
4. “Advisory Circular 00-1.1AB, Public Aircraft Operations.”
5. “Drone Response Playbook for Public Safety.”

All of these publications can be found at: https://www.faa.gov/uas/public_safety_gov/public_safety_toolkit

5.3 North Carolina Restrictions on Unmanned Aircraft Systems

North Carolina law has specific restrictions on the use of a UAS that apply to all UASs, whether they are used for recreational purposes, government purposes or commercial purposes.

It is a Class H felony in North Carolina to willfully damage, disrupt the operation of, or otherwise interfere with a manned aircraft through the use of a UAS while the manned aircraft is taking off, landing, in-flight or otherwise in motion. G.S. § 14–280.3. Anyone who endangers the airspace in this manner can also be subject to criminal charges under federal law.

It is a Class E felony to possess or use a UAS with a weapon attached to it. G.S. § 14–401.24. Prohibited weapons that may not be attached to a drone include any type of weapon that is generally restricted from being carried concealed in North Carolina such as handguns, any weapon of mass death and destruction or any other object capable of inflicting serious bodily injury or death when used as a weapon.

Under G.S. § 113–295, it is a Class 1 misdemeanor for a UAS operator to intentionally interfere with a lawful hunting or fishing activity or to intentionally harass or disturb wildlife to disrupt lawful hunting or fishing. It is also illegal to take or abuse property, equipment, or hunting dogs that are being used for lawful hunting or fishing.

It is also a Class 1 misdemeanor for any person to fish or to hunt using an unmanned aircraft system. G.S. 14-204.24.

Multiple North Carolina laws could be violated by a UAS operator for the same activity. For example, if a UAS operator flies a drone over the property of another person without their permission and uses a camera to take photographs inside the home without permission, the individual may be subject to the UAS laws and also be charged with the crime of secret peeping under G.S. § 14–202(c).

5.4 Use of UAS around Confinement Facilities

G.S. § 15A–300.3 regulates the use of any UAS near local, State, and federal confinement facilities. Unless one of the below exceptions is met, no person or entity, including any State agency, is able to use a UAS within either a horizontal distance of 500 feet, or a vertical distance of 250 feet, from any local, State or federal confinement facility. The horizontal distance is measured from the furthest exterior building walls, perimeter fences, and permanent fixed perimeter, or from another boundary clearly marked with posted notices prohibiting the use of a UAS.

These restrictions do not apply to:

1. A person operating a UAS with written consent from the official in charge of the confinement facility.
2. Law enforcement officers operating a UAS while discharging their official duties.
3. A public utility or commercial entity, as long as:
 - a. the UAS is not used within either a horizontal or vertical distance of 150 feet from any local, State, or federal confinement facility;
 - b. the public utility or commercial entity notifies the official in charge of the confinement facility at least 24 hours prior to operating the UAS;
 - c. the public utility or commercial entity uses the UAS to inspect public utility or provider transmission lines, equipment, or communication infrastructure or any other purpose directly related to the business of the entity;
 - d. the public utility or commercial entity complies with all Federal Aviation Administration (FAA) regulations and Article 10 of Chapter 63 of the General Statutes; and
 - e. the public utility or commercial entity operating the UAS does not physically enter the prohibited space of the confinement facility without an escort from the facility.
4. An emergency management agency, emergency medical services personnel, firefighters, and law enforcement officers, when using a UAS in response to an emergency.

Any person who delivers, or attempts to deliver, a weapon to a local, State, or federal confinement facility using a UAS is guilty of a Class H felony, which includes a fine of \$1500.

Any person who uses a UAS to deliver, or attempt to deliver, contraband to a local, State or federal confinement facility is guilty of a Class I felony, which includes a fine of \$1000. The term contraband includes controlled substances, cigarettes, alcohol, and communication devices, but does not include weapons.

Any other person who flies a UAS in violation of the horizontal or vertical limits set forth in the law is guilty of a Class 1 misdemeanor, which includes a fine of \$500.

A law enforcement agency is authorized, but not mandated, to seize a UAS and any attached property, weapons, or contraband when the UAS is used in violation of the law against flying near to confinement facilities. A seized UAS would be subject to the same forfeiture and disposition guidelines established for property seized pursuant to an alcoholic beverage control law violation under G.S. § 18B–504.

5.5 Other Prohibitions

Under G.S. § 15A-300.1, unless a specific exception exists (discussed below) people, entities and State agencies cannot use a UAS to:

1. Conduct surveillance of a person or dwelling occupied by a person or that dwelling's curtilage without the person's consent. Curtilage is normally described as that area of land immediately surrounding where a person lives that is used for the "comfort and convenience of the homeowner." In its simplest terms, curtilage envisions the kept yard around a dwelling, which may include storage buildings and the like;
2. Conduct surveillance of private real property without the owner's consent or the consent of the lessee of the property; or
3. Take photographs of an individual, without their consent, for the purpose of publishing or publicly sending out the photograph. However, photographs could be taken without a person's consent if they were part of a news gathering project, a newsworthy event, or taken at events or places where the general public is invited. For example, if a large Fourth of July celebration is held in a public park, a person or government agency could fly drones at the event and photograph people and the gathering.

5.6 Law Enforcement Exceptions

Under G.S. § 15A-300.1(c), law enforcement officers in North Carolina may, however, use UAS in the following circumstances:

1. To counter a high risk of a terrorist attack by a specific person or individual if the United States Secretary of Homeland Security or the Secretary of the Department of Public Safety determines that credible intelligence indicates that such a risk exists;
2. To conduct surveillance in an area that is within a law enforcement officer's plain view when the officer is in a location the officer has a legal right to be. For example, if an officer sitting in his vehicle on the side of a public roadway can look over a field and see marijuana plants growing, the officer would be able to use a drone to fly over the area;
3. If the law enforcement agency first obtains a search warrant authorizing the use of a UAS;
4. If the law enforcement agency has reasonable suspicion that the use of a UAS is necessary immediately to prevent imminent danger to life or serious damage to property, to stop the imminent escape of a suspect or the destruction of evidence, to conduct pursuit of an escapee or suspect, or to search for a missing person; or
5. To photograph gatherings where the public is invited on public or private land.

5.7 Special Imaging Technology

A UAS can be equipped with infrared or other special imaging technology. This is however limited by the above restrictions. For example, an individual can attach an infrared camera to their personal UAS, however, that drone cannot be used to take photographs of another individual without their consent. It is a Class A1

misdeemeanor to publish or disseminate images taken by a person or non-law enforcement entity through the use of infrared or other thermal imaging technology attached to a UAS without the consent of the property owner. G.S. § 14-401.25.

5.8 Protections from Unauthorized Surveillance

Anyone who finds themselves the subject of surveillance by a UAS in violation of the standards set out above, or whose photograph was taken in violation of the standards, would be able to bring a civil lawsuit against the person or agency (including law enforcement) that conducted the surveillance or took the photograph. Instead of receiving actual damages, the person who was photographed could elect to recover \$5000 for each photograph or video that is published or otherwise disseminated, as well as receive attorney's fees and court costs. The person could also ask for and receive from the court an injunction to prevent further violations. G.S. § 15A-300.1(e).

Any evidence obtained by a law enforcement agency in violation of the standards set out above cannot be used in a criminal prosecution in North Carolina, except when the evidence was obtained by an officer who had an objectively reasonable, good faith belief that they were acting under the law. G.S. § 15A-300.1(f).

5.9 Launch and Recovery Sites

No UAS can be launched or recovered from any State or private property without consent. Additionally, local governments can adopt ordinances to further regulate the use of property within their control for the launch or recovery of unmanned aircraft systems. G.S. § 15A-300.2. Some federal parks may also restrict the use of UAS on or above park property.

5.10 Indoor Flight

Indoor flight of a UAS is not governed by the FAA. Indoor flight means flight of UAS occurring in an enclosed space. Indoor UAS flights are the responsibility of the building owner; however, the conduct of those flights and any pictures taken as a result of those flights are still subject to North Carolina law.

6. Search and Seizure Case Law Related to Drones

The Fourth Amendment to the United States Constitution provides: “The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the person or things to be seized.”

The protections of the Fourth Amendment only extend to actions of the government found to be an unreasonable search or seizure. What constitute a search remains open to interpretation, depending on the technology involved and the particular circumstances of each case.

It is well settled that we all enjoy an expectation of privacy within our home. The government may not surveil the interior of a home without first obtaining a warrant to do so. *United States v. Karo*, 468 U.S. 705 (1984). This includes the use of thermal imaging to view activity within a home. Such conduct by law enforcement violates the Fourth Amendment unless the agency first obtains a search warrant to conduct this type of surveillance on a home. *Kyllo v. United States*, 533 U.S. 27 (2001). Therefore, drones cannot be used without a search warrant to spy on the interior of a home.

However, because areas outside and above the home are open to public view, a warrant may not be required when law enforcement surveils private property by using aircraft. There are several cases that illustrate this point. In *California v. Ciraolo*, 476 U.S. 207 (1986), police received an anonymous tip that the defendant was growing marijuana. The defendant had erected a fence to protect his garden from public view. Law enforcement used an aircraft to fly over the defendant's property at 1000 feet and observed marijuana plants. The Supreme Court found no Fourth Amendment violation and held there was no reasonable expectation of privacy in areas of the property open to view from above. Anyone flying in a private aircraft could have seen the marijuana.

In *Dow Chemical Co. v. United States*, 476 U.S. 227 (1986), the Environmental Protection Agency (EPA) took aerial photographs of outside areas of a Dow Chemical plant from aircraft, resulting in detailed pictures of the plant (Dow claimed this information was private and sensitive). The Supreme Court found no search occurred, and therefore no warrant was required, because the EPA had used an "ordinary" device to take the photographs, which was a camera with a high-powered lens. The outdoor areas of the Dow plant were treated by the court as analogous to an open field.

In *Florida v. Riley*, 488 U.S. 445 (1989) the Supreme Court held that a law enforcement helicopter flying as low as 400 feet could surveil private property without first obtaining a warrant. In *Riley*, the police received a tip that Riley was growing marijuana. The police used a helicopter to fly 400 feet above his property. The officers could see marijuana through missing roof panels in the green house located on the property. The Court held this did not constitute a search under the Fourth Amendment because anyone could lawfully fly above the property and observe what law enforcement saw. There was no reasonable expectation of privacy in this airspace. The Court did, however, note that the helicopter was not disturbing the quiet enjoyment of the property (such as by creating extra wind, kicking up dust, creating excessive noise, etc.).

Based on these cases, we know that operating a helicopter or other aircraft at between 400 and 1000 feet and observing outdoor areas on private property from above does not violate the Fourth Amendment because there is no reasonable expectation of privacy in these outdoor areas when viewed from navigable airspace. Also, the *Dow* case illustrates that you can use a camera (ordinary technology) to photograph property open to sight from navigable airspace without having to obtain a search warrant.

Law enforcement agencies in North Carolina must comply with the State and federal standards and restrictions discussed above for the operation of a UAS and also be aware of the Fourth Amendment implications discussed above.

7. Conclusion

Both State and federal law governing the operation of drones is constantly changing. Experience is showing that a UAS can be an invaluable asset to government agencies, including law enforcement, subject to the standards and restrictions described above. It is our hope that this publication will provide the basic information a law enforcement agency needs to begin their UAS program.

If you have any questions about these materials, please contact Jarrett McGowan, NCSA Associate General Counsel, at (919) 459-1431, or at: jmcgowan@ncsheriffs.net